How Homeopathy might work? - A conjecture

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I am an amateur homeopathic practitioner and have been using it for myself, my family and few of my friends for last 20-25 years. I have found it to be quite effective and specially so during COVID times. Many times, in the last 8-9 months, when I felt that I was coming down with flu-like symptoms I have used these medicines and in a couple of days the symptoms have vanished. There are hardly any medicines for flu in allopathic system, but homeopathy has.

Homeopathy Use

Homeopathy system of medicine was discovered by German physician Hahnemann in 1796 and is based in the maxim "like cures like". It does not cure the disease but helps the body cure it by triggering in it fighting mechanism for that particular disease. The medicines are given after matching the symptoms.

For the last 220 years the homeopathic system has been fine-tuned and expanded and a <u>large number of repertories have been published</u>. Presently homeopathy <u>is used by about 0.5 to 1 billion people worldwide</u> though the exact figure is not known. Thus $1/7^{th}$ of mankind might be using homeopathy. Homeopathy industry market <u>presently is ~ \$ 5.5 billion and in another 3-4 years it is estimated to reach \$ 16 billion.</u> Yet Allopathic doctors consider homeopathy as quackery and equivalent to Voodoo medicines since they cannot explain how it works. A question can be asked; if the homeopathy does not work then why so many people worldwide are using it?

A former International Director of Research at Roche had once told me that Roche has done extensive work in homeopathy and found that it works. When I asked him why Roche, the largest pharmaceutical company in the world, does not propagate its use he said that it will deal a crippling below to their much more lucrative allopathic products, so the results have been suppressed. In this article I present a possible conjecture on how it might work.

Passage through nose

Homeopathic medicines work by going straight to brain via the <u>olfactory bulb</u> in the nose and by breaching the <u>blood-brain-barrier (BBB)</u>. BBB normally does not allow foreign particles to enter the brain and is a mechanism to protect it. However homeopathic dilutions either with water or ethanol can do so easily.

Generally homeopathic medicines are given in the form of small globules which a patient is supposed to suck till they dissolve completely in the mouth. Through sucking of pills a small part of the medicine reaches the brain via the olfactory bulb. This helps the brain to trigger the mechanism by which body releases chemicals to fight the disease. That is why the best way to administer the homeopathic medicines is to spray the liquid directly on the tongue since this allows rapid transfer of the particle mist to the brain via the olfactory bulb. Also, homeopathic medicines are supposed to be taken half an hour before or after food consumption so that the food smells do not interfere with the aroma of medicine.

This mechanism of how medicines work through nasal route was <u>serendipitously</u> <u>discovered when scientists were trying to find a cure for brain and other tumors</u> <u>via nasal sprays</u>. They discovered that small amount of medicines delivered through a nasal spray did a far better job than very powerful chemotherapy which wrecks the body with side effects.

Vagus Nerve

The scientists also discovered that the efficacy of medicines increased with increasing dilutions. Digging deeper they also conjectured that the dilutions made the brain trigger responses which were transmitted by the <u>vagus nerve</u> (VN) to the disease-affected area and helped in curing it. I feel this is the mechanism by which homeopathy might also work.

<u>Vagus nerve</u> is the electrical highway of human body. It transmits the signals from the brain to different parts of the body to keep it healthy. Triggered by homeopathic medicine the brain sends the signal through the VN so that the appropriate "medicine" is produced locally. This is <u>similar to 3D printing</u> where the design template is sent via internet and the physical model is fabricated locally by a 3D printer. I feel that *effectively body is cured*, *repaired*, *and kept in good condition by the brain*. This follows the old saying healthy mind leads to a healthy body.

Dilution Conundrum

Another interesting aspect of homeopathic medicines is that their potency increases with increasing dilution. There are conflicting reports on why this happens. I feel that increased dilution of medicine allows the BBB to be breached with relative ease resulting in its enhanced effect in the brain.

Nevertheless, one of the most contentious issues of homeopathy is the fact that at higher dilutions, thermodynamic calculations show that there is not a single molecule of the original medicine in the mixture!

This has led to bizarre theories of how homeopathy works and includes "memory of water" as proposed by French scientist Jacques Benveniste in early 1990s. He proposed that the memory of water based on the original medicine helped in producing homeopathic cure!

However, a simpler answer may lie in understanding that in extreme dilutions (as found in homeopathic formulations) the <u>solutes form aggregates</u> which are nearly impossible to be removed from the solutions. I feel it is these aggregates which reach the brain and trigger the medicinal properties for cure. Also, extreme dilutions <u>change the physical-chemical properties of solvent</u> which may further assist in the healing process.

Thermodynamics is the science of averages. All thermodynamic properties follow the bell curve. Thus, when we say that the temperature of air is 30 degrees Celsius then it is the outcome of large number of air molecules with average energy impinging on our thermometer which gives rise to this temperature. However there also exist few air molecules which have higher energy and thus are very hot and similarly there are few molecules which have very low energy and are extremely cold. These molecules (outliers) lie on both sides of the bell curve and do not affect the temperature reading since they are few in numbers.

Similarly, when we have dilutions and calculate the number of molecules of the original medicine that may be in the solution, we do the calculations based on averages. It is the outliers which give homeopathy its medicinal properties and when they reach the brain it helps the brain to trigger the release of information which travels through the vagus nerve.

Scientists also conjecture that vagus nerve is extremely important in improving the immunity of body. Thus, <u>Vagus nerve stimulation (VNS)</u> (both electronically and chemically) is a new buzz word in improving the health of a person. Scientists believe that VNS helps in alleviating pain, in reducing several ailments like asthma, anxiety-related disorders, heart failures, among others. *I conjecture that homeopathic medicines may be chemically helping in this VNS process.*

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Suggested Readings

- 1. https://en.wikipedia.org/wiki/Homeopathy
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- 4. https://en.wikipedia.org/wiki/Olfactory_bulb
- 5. https://en.wikipedia.org/wiki/Blood_brain_barrier
- 6. https://www.scientificamerican.com/article/electronic-medicine-fights-disease/
- 7. https://en.wikipedia.org/wiki/Vagus_nerve
- 8. https://en.wikipedia.org/wiki/3D_printing
- 9. https://pubmed.ncbi.nlm.nih.gov/12240122/
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